

FILE ID**SETCLUSUB

19

(2) 56 'SETSVALIDATE_QUORUM'

0000 1 .TITLE SETCLUSUB
0000 2 .IDENT /V04-000/
0000 3 *****
0000 4 *
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0000 34 *
0000 35 *
0000 36 *
0000 37 *
0000 38 *
0000 39 *
0000 40 *
0000 41 *
0000 42 *
0000 43 * Define offsets and constants
0000 44 *
0000 45 *
0000 46 *
0000 47 *
0000 48 *
0000 49 *
0000 50 *
0000 51 *
0000 52 *
0000 53 *
00000000 54 .PSECT SET\$CODE BYTE, RD, NOWRT, EXE
FFFFFFFFFF FFF0BDC0 0000 .ONE_TENTH: .LONG -1*1000*1000*1, -1

'SET\$VALIDATE_QUORUM'

```

0008 56 .SBTTL 'SET$VALIDATE_QUORUM'
0008 57 ++
0008 58     SET$VALIDATE_QUORUM
0008 59
0008 60 .FUNCTIONAL DESCRIPTION:
0008 61     Validate proposed value for quorum to ensure that it is neither
0008 62     too high nor too low, and pin it accordingly if it is out of range.
0008 63     Pass the validated quorum value to the connection manager for
0008 64     setting in the cluster.
0008 65 .CALLING SEQUENCE:
0008 66     CALL SET$VALIDATE_QUORUM ( quorum, new_quorum )
0008 67 .INPUT PARAMETERS:
0008 68     P1      = new quorum value, or 0
0008 69             If 0, set according to (V+2)/2 formula.
0008 70 .IMPLICIT INPUTS:
0008 71     V      = CLUBSV_VOTES, total number of cluster votes
0008 72 .OUTPUT PARAMETERS:
0008 73     new_quorum = address of longword to receive actual value set
0008 74 .IMPLICIT OUTPUTS:
0008 75     none
0008 76 .COMPLETION CODES:
0008 77     SSS NORMAL      = quorum set
0008 78 .SIDE EFFECTS:
0008 79
0008 80 .--.
0008 81
0008 82 .ENTRY SET$VALIDATE_QUORUM, "M<R2,R3>
000A 83
000A 84 : This work must be done in kernel mode, and synchronized with the
000A 85 : connection manager.
000A 86
000A 87 $S: SCMKRNL_S B^CHANGE_QUORUM,(AP) : Do this in kernel mode
0016 88     MOVL R0,R3 : Save status of request
0019 89
0019 90 : At this point, we wait in user mode for a short time, then test to see
0019 91 : if the connection manager has completed its work.
0019 92
0019 93 10S: S$SETIMR_S -
0019 94     efn      = #EXESC_SYSEFN : Define a tick
0019 95     daytime  = B^ONE_TENTH : ...use system event flag
002E 96     BLBC     R0,15$ : ...shouldn't be perceptible
002E 97     SWAITFR_S -
002E 98     BLBC     R0,15$ : any error will be program bug
003B 99     BLBC     R3,5$ : 
003E 100    SCMKRNL_S B^TEST_QUORUM : 
0041 101    BLBC     R0,10$ : 
004D 102    MOVL     R2,08(AP) : 
0050 103    RET      : 
0054 104    RET      : 
0055 105    RET      : 
0055 106    15S: PUSHL   R0 : 
0057 107    CALLS   #1,G^LIB$SIGNAL : 
005E 108    RET      : P1 = condition (assume no FAO args)
                           : Signal the error.
                           : Done

```

'SET\$VALIDATE_QUORUM'

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005F 110 CHANGE_QUORUM:
51 04 AC 0000 005F 111 .WORD 0
0061 112 MOVL 4(AP),R1
0065 113 SETIPL B^IPL_SYNCH
0069 114 :
0069 115 : Tell the connection manager to set a new quorum. The connection manager
0069 116 : must handle this since it is done in a coordinated fashion across the
0069 117 : cluster. The quorum value is passed in R1 to this routine.
0069 118 :
0069 119 : Note that the connection manager is responsible for sanity-checking the
0069 120 : quorum value.
0069 121 :
00000000'GF 16 0069 122 JSB G^CNX\$CHANGE_QUORUM ; Set new quorum value
006F 123 :
006F 124 : Done with the synchronized part. Return status in R0 to user mode.
006F 125 :
006F 126 SETIPL #0
04 0072 127 RET ; Out of sync
; Back to user mode

0073 129 :
0073 130 : Subroutine to return new quorum in R2, or error if not yet set.
0073 131 :
0073 132 TEST_QUORUM:
0000 0073 133 .WORD 0
0075 134 :
52 00000000'GF D0 0079 135 SETIPL B^IPL_SYNCH : Lock down page, synch with cnx mgr
50 D4 0080 136 MOVL G^CLUSGL_CLUB,R2 : Get CLUB structure
1B E0 0082 137 CLRL R0 : Assume new quorum not set yet.
1C A2 0084 138 BBS #CLUBSV_ADJ_QUORUM,- : If BS, still in process of setting quorum
07 0086 140 CLUBSL_FLAGS(R2),-
52 20 A2 3C 0087 141 MOVZWL CLUBSW_QUORUM(R2),R2 : Done...get new quorum.
50 01 D0 0088 142 MOVL #1,R0 : Flag success
008E 143 10\$: SETIPL #0 : Desynchronize
04 0091 144 RET : Done
0092 145 :
0092 146 IPL_SYNCH: .LONG IPL\$_SYNCH : End of locked-down portion
00000008 0092 147 :

SETCLUSUB
V04-000

'SET\$VALIDATE_QUORUM'
0096 149 .END

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SETCLUSUB Symbol table

SST1	=	00000000	
CHANGE_QUORUM		0000005F	R 02
CLUSGL_CLUB		*****	X 02
CLUBSL_FLAGS	=	0000001C	
CLUBSV_ADJ_QUORUM	=	0000001B	
CLUBSW_QUORUM	=	00000020	
CNXCHANGE_QUORUM		*****	X 02
EXESC_SYSEFN		*****	X 02
IPLS_SYNCH	=	00000008	
IPL_SYNCH		00000092	R 02
LIB\$SIGNAL		*****	X 02
ONE_TENTH		00000000	R 02
PRS_IPL		*****	X 02
SET\$VALIDATE_QUORUM		00000008	RG 02
SYSSCMKRL		*****	GX 02
SYSSSETIMR		*****	GX 02
SYSSWAITFR		*****	GX 02
TEST_QUORUM		00000073	R 02

+-----+
! Psect synopsis !
+-----+

PSECT name

Allocation	PSECT No.	Attributes
00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
00000096 (150.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

! Performance indicators !

Phase

Initialization
Command processing
Pass 1
Symbol table sort
Pass 2
Symbol table output
Psect synopsis output
Cross-reference output
Assembler run total

Page faults	CPU Time	Elapsed Time
10	00:00:00.09	00:00:01.75
82	00:00:00.96	00:00:04.82
181	00:00:03.55	00:00:19.60
0	00:00:00.40	00:00:00.72
53	00:00:00.68	00:00:03.33
4	00:00:00.03	00:00:00.34
1	00:00:00.03	00:00:00.52
0	00:00:00.00	00:00:00.00
333	00:00:05.74	00:00:31.08

The working set limit was 900 pages.

17041 bytes (34 pages) of virtual memory were used to buffer the intermediate code.

17041 bytes (54 pages) of virtual memory were used to buffer the intermediate code. There were 20 pages of symbol table space allocated to hold 297 non-local and 4 local symbols.

149 source lines were read in Pass 1, producing 16 object records in Pass 2.

149 source lines were read in Pass 1, producing 18 object
18 pages of virtual memory were used to define 17 macros.

! Macro library statistics !

Macro library name

-\$255\$DUA28:[CLIUTL.OBJ]CLIUTL.MLB;1
-\$255\$DUA28:[SYS.OBJ]LIB.MLB;1
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2
TOTALS (all libraries)

Macros defined

0
5
9
14

413 GETS were required to define 14 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LISS:SETCLUSUB/OBJ=OBJ\$:SETCLUSUB MSRC\$:SETCLUSUB/UPDATE=(ENH\$:SETCLUSUB)+EXECMLS/LIB+LIB\$:CLIUTL/LIB

0052 AH-BT13A-SE
VAX/VMS V4.0

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